

PATENT

REMARKS

Status of the Claims: Claims 1-16 and 18-23 and new claims 24, 25, 26 and 27 are now pending in the application.

In view of the amendments in claims 1 and 23 (and in the dependent claims which relate back to claim 1) submitted for reconsideration are 1-4, 7-9, 12, 13, 16, 21 and 22, which had been rejected.

Claims 5, 6, 10, 11, 14, 15 and 18-20 were previously objected to as being dependent upon a rejected base claim, with Examiner's indication that they would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 5, 6, 7, 8, 9 and 14 are amended only to correct indefinite articles or syntax so as to be consistent with base claim 1. Claim 15 has been amended only to change "a single pass" to --at least one pass--.

Interview Summary

Applicant Garoutte interviewed Examiner Choobin on Thursday, March 17, 2005. The courtesy of permitting such interview is very much appreciated.

Examiner's subsequent Interview Summary reflects the proposed submission of proposed claim amendments before further Official Action and that agreement was not reached on rejected claims. Examiner's Interview Summary has a requirement to file a statement of the substance of the interview, not later than 17 April 2005. Applicant complies accordingly and notes as follows:

The subject matter of claims 1 and 23 was discussed, and Applicant and Examiner also noted the provisions of some claims depending from claim 1. Applicant emphasized the novel aspect of creating a "terrain map" as claimed. Mr. Garoutte explained the term, together with the background of the invention, and emphasized his belief that the term "terrain map" had never been used in the field of image transforms or security system analysis of captured video scenes, and that it had only a geographic meaning far different from the invention. It was contended that claim 1 is allowable over the cited art MacCormack et al. ("MacCormack") and Brady.

PATENT

Mr. Garoutte explained some of many advantages of the system, as claimed, and the aspect of its capability of deriving some eight bytes of information about an area in a scene, the area not being limited to a single pixel (being more than one pixel) but arbitrary in size. He also pointed out advantages of the use of the terrain map data, as compared with video information typically gained and stored as typically carried out in the prior art. He also explained to Examiner use of this additional information in a security system, and many advantages, allowing a single processor to operate, for example, eight video cameras, being thereby much more efficient than competitive systems. Applicant also emphasized that creating a so-called "terrain map" is entirely novel according to Applicant's understanding of the prior art.

Examiner referred to what appeared to be the "landmark" concept of the present invention but indicated that in his view claims 1 and 23 were too broadly worded relative to MacCormack. Thus, he suggested that language be incorporated into each of claims 1 and 23. Examiner suggested, and Applicant agreed, to submit proposed amendments to claims 1 and 23 by fax before further action.

Applicant has done so herein.

Summarized below are the present claim amendments.

Claims 1 and 23.

These claims are both amended as according to the interview with Examiner and are treated here together because of similar amendments.

Claim 1 adds the feature, relative to the terrain map comprising a plurality of parameters wherein said parameters indicate the content of said video image data, as follows:

said parameters comprising an average altitude parameter; a degree of slope parameter; a direction of slope parameter; a horizontal smoothness parameter; a vertical smoothness parameter; and a jaggyiness parameter.

Claim 23 similarly adds the feature, relative to said terrain map comprising a plurality of parameters wherein said parameters indicate the content of said video image data, as follows:

said parameters comprising an average altitude parameter; a degree of slope parameter; a direction of slope parameter; a horizontal smoothness parameter; a vertical smoothness parameter; and a jaggyiness parameter.

PATENT

In addition, both claims recite performing at least one pass through a frame of said video image data, rather than "a single" pass.

In any event, these claims are believed to be properly allowable over MacCormack and Brady, which neither teach nor suggest anything like these features.

Claim 18

Claim 18, previously indicated as allowable if rewritten independently, was previously amended to include the limitations of claim 17, the only claim from which it depended. It follows that claim 18 should remain allowable in the application.

Claims 21 and 22

Both were rejected on a theory of Official Recognition, but both claims are now made dependent from claim 18, and so should both be allowable with claim 18, which is now independent.

Claims 5, 6, 10, 11, 14, 15 and 18-20 were objected to as being dependent upon a rejected base claim, and are submitted now to be allowable in the application, as the only amendments made therein are to correct the language relating to the "parameters" so as to be fully consistent in syntax with claim 1, as herein amended.

New claims 24, 25, 26 and 27

These new claims are drawn from the specification. They introduce no new matter. There is antecedent basis found in the application specification at page 10, in the paragraphs beginning on line 18.

New claim 24 here presents a method for real-time analysis of video image data for subject content, said method comprising the steps of:

- (a) performing at least one pass through a frame of said video image data; and
- (b) generating a terrain map from said pass through said frame of said video image data, said terrain map comprising a plurality of parameters wherein said parameters indicate the content of said video image data,

PATENT

said terrain map containing in said plurality of parameters characteristic information regarding the content of the video, the characteristic information being based on each of kernels of pixels in an input buffer, the characteristic information comprising at least a number of bytes of data describing the relationship of each of a plurality of pixels in a larger kernel surrounding the first-said kernel. (Italics added here for emphasis.)

In this regard, Applicant asks Examiner to reconsider each of MacCormack and Brady, which neither teach nor suggest anything like the limitations in the last paragraph (italics), as explained generally by Applicant during the interview. Applicant would like to re-emphasize that the entire concept of "terrain map" as here claimed and described by Applicant is believed to be completely novel. At risk of repetition, Applicant's Amendment A made the following statement (italics for emphasis here):

The present patent application is concerned with technology wherein, as the application provides at page 10, lines 27-30: "The informational content of the video generated by the Terrain Map is the basis for all image analysis techniques of the present invention and results in the generation of several parameters for further image analysis."

[See] . . . the Declaration of Maurice V. Garoutte, the Applicant inventor who is Chief Technical Officer of the assignee of the application, and to consider carefully the so-called "white paper" appended to the declaration. It is a detailed authoritative report entitled TERRAIN MAP, AN IMAGE SPACE FOR MACHINE VISION. It has the purpose of emphasizing the inventive features, operation, method and advantages of the [present] invention. It explains the ways in which the presently claimed invention differs from the prior art, such as MacCormack et al. ("MacCormack").

. . . [W]hen . . . the white paper called TERRAIN MAP, AN IMAGE SPACE FOR MACHINE VISION [is read], Examiner will appreciate that Applicant's invention differs hugely from the disclosure of MacCormack. It only then be understood that the present invention are "two different animals."

. . . It will be too tempting to read too much into the use of the work "map" by MacCormack, where in reality it is not [related] to the use of a terrain map employed by Applicant, as claimed. (Emphasis added here.)

Regarding MacCormack, Applicant must emphasize again that one should not be misled by use of the term "map" by MacCormack, for that has nothing to do with the presently claimed concept of a terrain map, as here claimed and set forth in claim 1 in particular, and other claims of the application and as described in the present patent application. The present claims, and specifically claim 24, as

PATENT

well as other claims of the application, describe a unique way to describe and handle an image, different from image space and color space as those terms have been known in the prior art. Examiner should understand that "terrain map" as presently defined and described is a new "space" to describe images. No recognized name is used in the prior art for the old space, but such extant image formats of the prior art can be thought of as brightness maps.

For example, in the prior art, including MacCormack, it is true that Gray scale images are brightness maps with the value of every pixel coded for the brightness that should be displayed to a human for correct perception of the image, and that RGB (Red-Green-Blue) color images are brightness maps with the value of every pixel coded for the brightness that the Red, Green, and Blue should be displayed to a human for correct perception of the image. Applicant has observed that, in the prior art, the concept of arranging image formats in brightness maps is so ingrained by industry practice that there is no name for it. In such known image handling and storage practices (including that of MacCormack), the ordinarily skilled artisan assumes that images should be stored in such a way that humans can correctly perceive the image, because after all images are intended for one fundamental purpose, namely, human perception.

MacCormack is concerned with image movement and with thereafter presenting images in which there is movement to a human viewer and for archiving. This is easily seen from the MacCormack Abstract of the Disclosure. The only analysis provided by MacCormack is to determine image *movement*.

There does not exist in either MacCormack or Brady, nor in art otherwise cited, any teaching or suggestion useful to the person having ordinary skill in the art, of the feature of "said terrain map containing in said plurality of parameters characteristic information regarding the content of the video, the characteristic information being based on each of kernels of pixels in an input buffer, the characteristic information comprising at least a number of bytes of data describing the relationship of each of a plurality of pixels in a larger kernel surrounding the first-said kernel." (Emphasis added here.)

Thus, it is believed that claim 24 should be patentable in the application.

New claim 25 sets forth a computer system for automated screening of security cameras, the system providing real-time analysis of said video image data for subject content, and including:

PATENT

- (a) provision for performing at least one pass through a frame of said video image data; and
- (b) provision for generating a terrain map from said pass through said frame of said video image data, said terrain map comprising a plurality of parameters wherein said parameters indicate the content of said video image data; . . .

and it also further recites the feature of:

said terrain map containing in said plurality of parameters characteristic information regarding the content of the video, the characteristic information being based on each of kernels of pixels in an input buffer, the characteristic information comprising at least a number of bytes of data describing the relationship of each of a plurality of pixels in a larger kernel surrounding the first-said kernel.

It should be clear that the same features are as set forth in claim 24, and so it is submitted that claim 25 is properly patentable in the application over MacCormack and Brady, whether considered singly or in combination.

New claims 26 and 27 relate back (being similar to other claims already set forth as earlier dependencies) to claim 25, and should be allowable with claim 25.

Summary

The references cited but not applied are not believed to be more relevant than the art applied.

In view of the arguments made, further consideration of the application and a notice of allowance are respectfully requested.

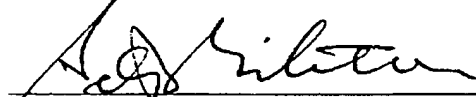
While it is believed that the foregoing satisfies all issues of patentability, and resolves any remaining issues, if Examiner believes there is any remaining issue which could be readily resolved or other action could be taken to advance this application, such as Examiner's amendment, it is requested that Examiner please telephone the undersigned Peter S. Gilster. If necessary to effect a timely response, this paper should be considered as a petition for extension of time of length sufficient to be considered timely.

PATENT

Applicant herewith presents one extra independent claim and two extra dependent claims which are subject to additional fees totaling \$175. The fees required are authorized to be charged to Deposit Account No. 07-1985.

Respectfully submitted,

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Date


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Accompanying documents:

Fax Transmittal with Certification of Transmission with fee authorization